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through a use of the one of the superior 12 or inferior 14 members having been formed in a two piece construction. Theoretically, both members 12, 14 can be made into a two piece structure, however, it is important that at least one of the members 12 or 14 have the ability to translate by being made 5 into a two piece construction 12, 16 or 14, 16 wherein the main body portion allows a sliding intermediate portion 16 to slide in a base body portion of member 12, 14 back and forth, fore and aft or anteriorly and posteriorly so that as the neck is thrust forward or pulled back there is a slight ability to move 10 or translate in a posterior and anterior direction without the necessity of the bearing surface 50 to be adjusted in any fashion with regard to a rotational movement. This added feature creates an additional agility of the patient to be able to maneuver his neck in a more comfortable fashion than could 15 otherwise be achieved.

In a preferred embodiment, the members can be made at least along one or both bearing surfaces of a ceramic material for its good wear characteristics. Other parts can be made of a synthetic polymer, either with or without ferromagnetic 20 an intermediate bearing layer interposed between the bearing particles or properties.

Variations in the present invention are possible in light of the description of it provided herein. While certain representative embodiments and details have been shown for the purpose of illustrating the subject invention, it will be apparent to 25 those skilled in this art that various changes and modifications can be made therein without departing from the scope of the subject invention. It is, therefore, to be understood that changes can be made in the particular embodiments described, which will be within the full intended scope of the 30 invention as defined by the following appended claims.

What is claimed is:

1. An improved artificial disc comprises: a superior member having an upper body portion;

an inferior member having a lower body portion; and wherein the upper body portion and the lower body portions, when positioned in a disc space between the upper and lower vertebral bodies and affixed to a respective vertebral body, are independently movable relative to the other along complimentary bearing surfaces on each 40 of the superior and inferior members and wherein the complimentary bearing surfaces are self-aligned by a magnetic attraction force generated by at least one first permanent magnet aligned with an apex of one of said bearing surfaces in either the inferior or superior mem- 45 ber, wherein the bearing surfaces include one circular convex surface and one complimentary circular concave surface, the convex bearing surface aligned and matingly engaged with the concave bearing surface at the apex and wherein the bearing surfaces are translatable in 50 any direction about the other through movement of the neck or vertebrae to which upper body and lower body portions are attached allowing for movement in any direction with regard to angular rotation about an axis of the artificial disc wherein the inferior or superior mem- 55 ber opposite the member with the first permanent magnet has at least one second permanent magnet of opposing polarity relative to the at least one first permanent magnet or has a ferromagnetic composition responsive to the magnetic attractive force to self-align the complimentary bearing surfaces.

2. The improved artificial disc of claim 1 further comprises; a pair of flange portions, one flange portion on the superior member for positioning and attachment to an upper vertebral body and one flange portion on the inferior member for positioning and attachment to a lower vertebral body; and

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wherein the complimentary bearing surfaces can move relative to the other in any direction by a movement of the vertebral body to which the flange is fixed, the bearing surfaces will maintain an attractive magnetic field to return to contact of the bearing surfaces upon separation during said movement.

- 3. The improved artificial disc of claim 2 wherein one of the superior or inferior members or both further has the respective upper or lower body portion formed as a two piece assembly having one base piece fixed to the flange and one movable bearing surface piece slidingly engaged to the base piece wherein the bearing surface piece can move directionally anteriorly or posteriorly relative to the base.
- 4. The improved artificial disc of claim 1 wherein the inferior or superior member opposite the first permanent magnet has a ferromagnetic composition responsive to the magnetic field of the opposite member.
- 5. The improved artificial disc of claim 1 further comprises surfaces, the intermediate bearing layer conforming to either the convex or concave surface or both.
- 6. The improved artificial disc of claim 5 wherein the intermediate bearing layer is made of a compressible cushion polymer.
- 7. The improved artificial disc of claim 6 wherein the intermediate bearing layer has magnetically attachable particles intermixed in the polymer.
- 8. The improved artificial disc of claim 1 wherein one or both of the bearing surfaces are made of a ceramic material.
- 9. An improved artificial disc comprises: a superior member having an upper body portion; an inferior member having a lower body portion; and

wherein the upper body portion and the lower body portions, when positioned in a disc space between the upper and lower vertebral bodies and affixed to a respective vertebral body at the flange portion, are independently movable relative to the other along complimentary bearing surfaces on each of the superior and inferior members and wherein the complimentary bearing surfaces are self-aligned by a magnetic attraction force generated by two permanent magnets, one first magnet aligned with an apex of one of said bearing surfaces being in the inferior member and one second magnet of opposing polarity in the superior member, wherein the bearing surfaces include one circular convex surface and one complimentary concave circular surface, the convex bearing surface aligned and matingly engaged with the concave bearing surface at the apex and wherein the bearing surfaces are translatable in any direction about the other through movement of the neck or vertebrae to which upper body and lower body portions are attached allowing for movement in any direction with regard to angular rotation about an axis of the artificial disc wherein the inferior or superior member opposite the member with the first permanent magnet has at least one second permanent magnet of opposing polarity relative to the at least one first permanent magnet responsive to the magnetic attractive force to self-align the complimentary bearing surfaces.

10. The improved artificial disc of claim 9 wherein the first and second magnets each have at least two polarities on each top or bottom surface, the first magnet facing the second magnet with opposing polarities aligned at a centered position.

11. The improved artificial disc of claim 10 wherein the first and second magnets have three polarities on each top or